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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/743,893

12/22/2003

Ali Yahiaoui

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7590

05/01/2006

KIMBERLY-CLARK WORLDWIDE, INC.
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EXAMINER

TUROC, DAVID P

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,893

Applicant(s)

YAHIAOUI ET AL.

Examiner

David Turocy

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 27 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-24 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/23/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 9/23/05 was filed after the mailing date of the non-final rejection. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Amendment

2. Applicants amendments to the claims, filed 9/23/2005, and amendments to the specification, filed 2/21/2006, have been fully considered and reviewed by the examiner. The examiner notes the amendment to the specification to update the status of a related application and therefore the specification objection has been withdrawn. In light of the added limitation the obvious type double patenting rejections have been withdrawn. The examiner notes the amendment of claim 15, the cancellation of claims 25 and 26 and the addition of new claim 27. Claims 1-24 and 27 are pending with claims 1-14 withdrawn due to a restriction requirement.

Response to Arguments

3. Applicant's arguments with respect to the claims have been considered but are directed to newly added limitations and are therefore deemed moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 15-24 and 27 are rejected under 35 U.S.C. 103 (a) as being unpatentable over by US Patent 4581254 by Cunningham et al, hereafter Cunningham in view of US Patent 3303576 by Sisson, hereafter Sisson

15-17, 19, 21, and 27: Cunningham discloses a method of treating a porous substrate, inherently having a first and second surface, by contacting foam comprising a surfactant to a first side of the substrate and therefore less surfactant adheres to the second surface of the substrate (Column 6, Figure 1-2). The paper surfactant solution,

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- comprising the surfactant in water as an emulsion, dispersion, or solution, includes
- greater than 15% surfactant and specifically discloses 16.7 wt % in Example 5, which is within the ranges as claimed. Cunningham discloses applying the surfactant foam to either or both sides of the substrate (Column 8, lines 52-60).

- Cunningham discloses applying the foam, including the surfactant during the
- papermaking process where the paper may be near saturation (Column 5, lines 50-60), but fails to disclose drying the porous, treated substrate by directing gas from a second surface to the first surface so that the surfactant is driven from the second surface toward the first surface.

- However, Sisson, discloses a method of drying porous paper at the end of the paper making process, includes heating air at a pressure greater than atmospheric and supplying the heated air into the interior of a drum and forcing the air, through the
- pressure differential, through the porous paper substrate to dry the paper (Column 1, lines 25-50, Column 3, lines 4-15, Figures). The pressure differential would result in air moving from the interior surface to the exterior surface and therefore driving any moisture from the interior surface to the exterior surface.

- Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cunningham to use through air drying of a paper web as suggested by Sisson to provide a desirable drying of a paper web during the papermaking process because Sisson discloses through air drying of a paper web
- during paper making using pressure differential is known in the art to provide fast drying

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of a traversing paper web and therefore would reasonably be expected to effectively provide drying of the paper web in the process of Cunningham.

Claim 18: Cunningham in view of Sisson fails to disclose using a ratio of air volume to liquid volume not greater than 30 to 1. However, Cunningham discloses the amount of liquid treating composition relative to air in an effective ratio to provide the required, uniform foam structure in the foam applicator (Column 7, lines 50-60). Therefore Cunningham discloses the volume ratio to air and liquid is a result effective variable.

Therefore it would have been obvious to one skill in the art at the time of the invention was made to determine the optimal value for the ratio of air volume to gas volume used in the process of Cunningham in view of Sisson, through routine experimentation, to impart the foam with the desired properties of uniform foam structure in the applicator.

Claim 20: Cunningham in view of Sisson fails to disclose using 0.5 weight percent of the solution comprising surfactant(s) relative to the weight of the porous substrate. However, Cunningham discloses controlling the amount of the foam, i.e. controlling the weight percent of the liquid solution, applied to the surface of the porous substrate to provide a uniform treatment (Column 9, lines 41-45). Therefore Cunningham discloses controlling the amount of foam applied to the substrate is within the skill of one ordinary in the art depending on the desired treatment. In addition, it is

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the examiners position that the amount of surfactant applied is a known cause effective variable. If amount of surfactant applied is too low it would result in too little surface treatment and too much surfactant would result in no added benefits increased surface treatment

Therefore it would have been obvious to one skill in the art at the time of the invention was made to determine the optimal value for the surfactant applied by controlling the amount of treating agent used in the process Cunningham in view of Sisson, through routine experimentation, to impart the substrate with the desired properties associated with the surfactant.

Claims 22-24: Cunningham discloses providing a porous substrate in a first direction, bending the substrate into a second direction to define a wrap angle, where the surfactant(s) are applied to the first surface at about the point the substrate bends into the second direction, however, Cunningham in view of Sisson fails to explicitly disclose a wrap angle with the ranges as claimed. However, Cunningham discloses providing a wrap angle inclusive of the ranges as claimed, using the ranges discloses for angles C, D, and F, where the wrap angle is defined as the $180^\circ - (C + D + F)$ (Figure 2, Column 4, line 51-Column 5, line 5). In the case where the claimed ranges "overlap or lie" inside ranges disclosed by prior art a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257 191 USPQ 90. See MPEP 2144.05.

In particular using the preferred lower limit of angles C, D, and F results in a wrap angle of 149° ($C = 15^\circ$, $D = 1^\circ$ and $F = 15^\circ$) (Figure 2, Column 4, line 51-Column 5, line

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5). In particular the case where the wrap angle is disclosed as 149°, a *prima facie* case of obviousness exists where the claimed ranges and prior art do not overlap but are close enough that one in ordinary skill in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 f.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2144.05.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-

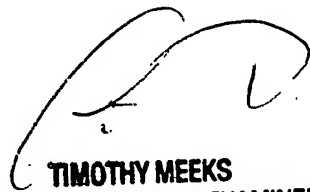
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2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy
AU 1762



TIMOTHY MEESKS
SUPERVISORY PATENT EXAMINER